

# Coalition Multinational Division (MND) Network

## Status

- Hub antenna location incorporated into Victory Base TCF / Satellite park plan
- 1 Hub, 4 Major nodes, & 2 Minor nodes installed by 30 June to replace existing capability
- Remaining 14 Nodes by 16 July (4 Major & 10 Minor)



Vic Base - "KICC-ville" JAN 2004

# CMN Overview



Supporting Operations  
Iraqi Freedom

- IP Based Bandwidth-on-Demand SATCOM network
  - Full-Mesh, Single-hop Voice Network
  - Broadband Hub & Spoke Data Network
- Network provides Voice and Data services
  - Serving 1000+ voice lines
  - LAN to WAN Data Network
- Economic utilization of leased commercial transponder
  - Multi-Frequency TDMA provides 3-4X reduction in required transponders
- Tested & Proven COTS equipment enables fast deployment and low cost
  - Network deployed and operational in 6 months
  - Terminals  $\frac{1}{2}$  -  $\frac{1}{4}$  cost of non-COTS solutions with comparable capacity



# CMN - Network Services



3

## ■ Secure Voice Services

- Serving 1000+ voice lines
- IPSEC TRANSEC with STU/STE/FNBDT/DSVT COMSEC
- Single Hop, IP Routed Secure Voice
- 16 to 32 analog voice lines per site

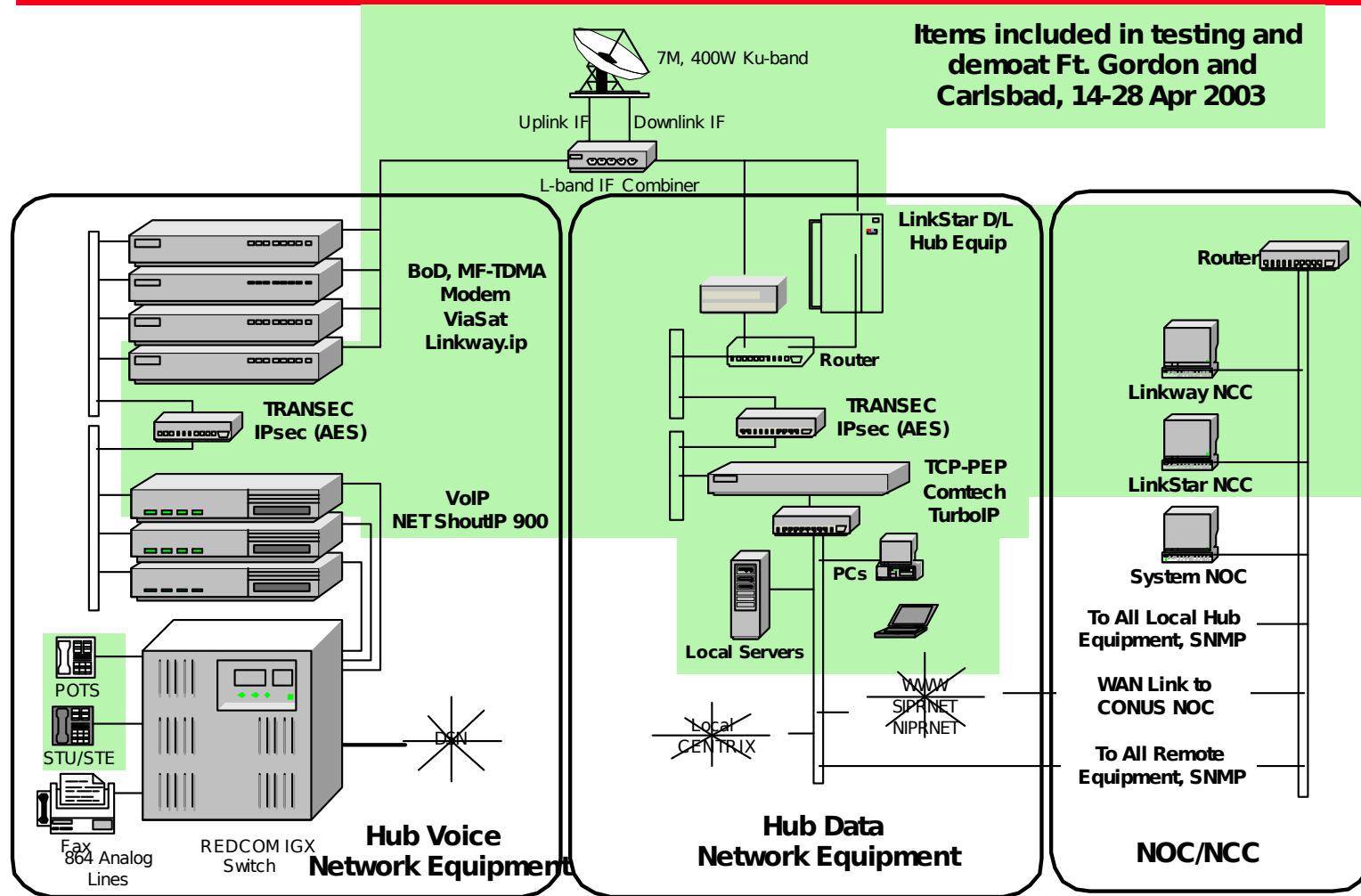
## ■ Secure Data Services

- LAN to WAN Data Network
- IPSEC TRANSEC with TACLANE COMSEC
- 2 Network Classification Levels
- 512kb/s – 8 Mb/s data per site

# CMN - Communications ~~Design~~

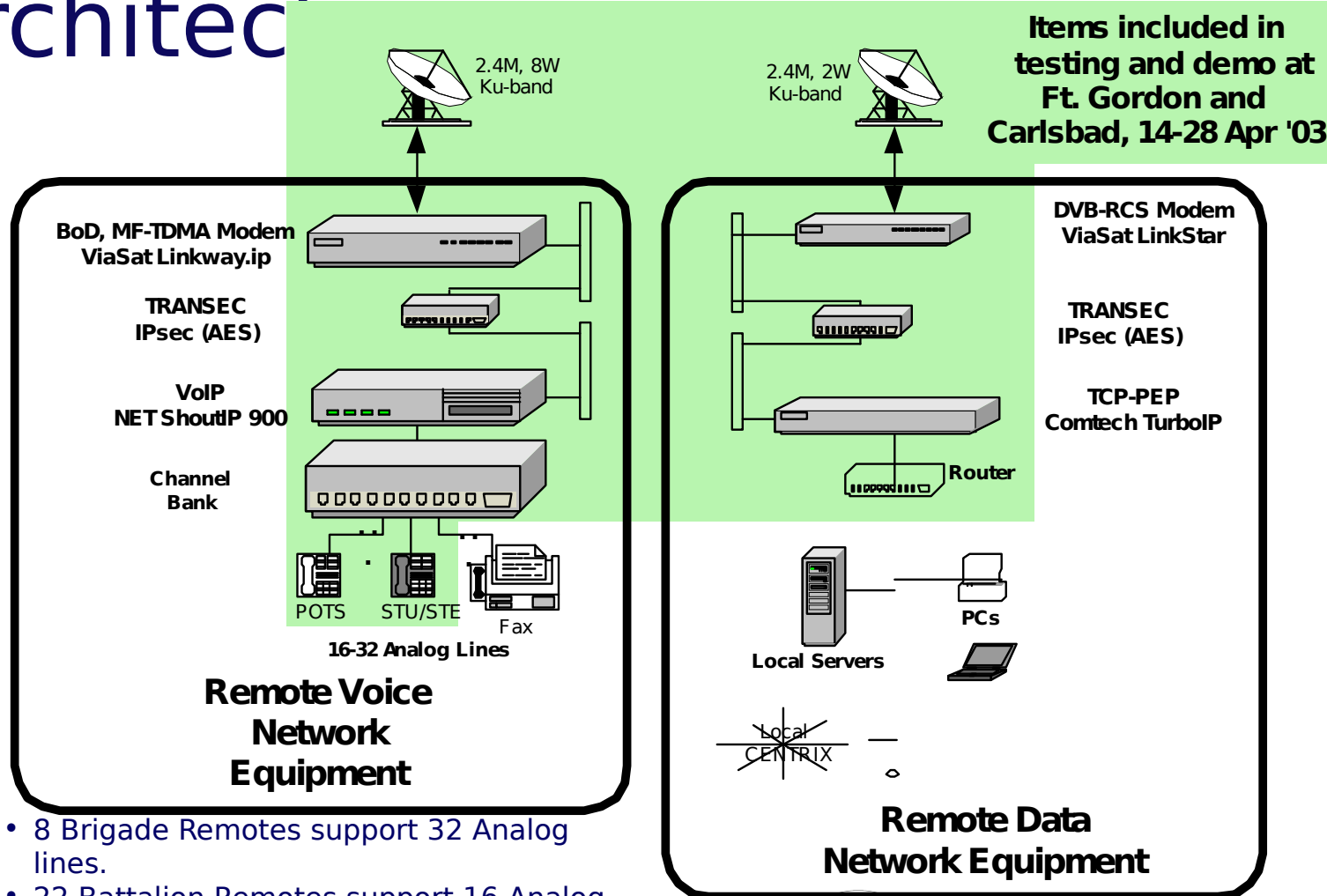
- 72 MHz of Ku-bandwidth
  - Transponder lease on Eutelsat W5 satellite
  - Sufficient to support over 60 remote terminals
- Remote terminals dynamically request bandwidth from HUB
  - HUB provides dynamic TDMA timeslot assignments to each Remote Terminal
  - Remote-to-Remote communications can provide full mesh network
    - Greatly improves voice communications quality
    - Greatly improves secure telephony operations and reliability
- Bandwidth-on-Demand saves transponder lease costs
  - ~3-4X reduction in number of transponders required
  - Multiplexing of bursty data and voice traffic
  - Voice quality maintained via IP QoS implementation
- Single IP based network for voice and data
  - Voice services provided via IP routed VoIP
  - TCP accelerator provides maximum IP performance over long delay satellite

# CMN - Hub Architecture



Connections to DSN, WWW, SIPRNET, NIPRNET are feasible, but not included in program requirements.

# CMN - Remote Node Architecture



- 8 Brigade Remotes support 32 Analog lines.
- 22 Battalion Remotes support 16 Analog lines.

# CMN System NOC

## Architecture

